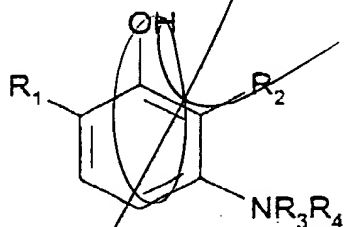


CLAIMS

1. Composition for the oxidation dyeing of human keratin fibres and in particular human keratin fibres such as the hair, characterized in that it comprises, in a medium which is suitable for dyeing:
- at least one oxidation base chosen from diaminopyrazoles and triaminopyrazoles;
 - and at least one coupler chosen from the halogenated meta-aminophenols of formula (I) below, and the addition salts thereof with an acid:



(I)

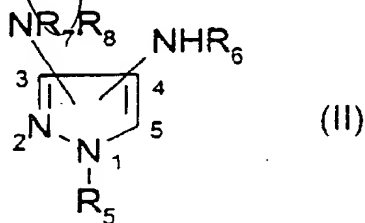
in which:

- R_1 and R_2 , which may be identical or different, represent a hydrogen atom, a halogen atom such as chlorine, bromine, iodine or fluorine, a C_1 - C_4 alkyl radical, a C_1 - C_4 monohydroxyalkyl radical, a C_2 - C_4 polyhydroxyalkyl radical, a C_1 - C_4 alkoxy radical, a C_1 - C_4 monohydroxyalkoxy radical or a C_2 - C_4 polyhydroxyalkoxy radical;
- R_3 and R_4 , which may be identical or different, represent a hydrogen atom, a C_1 - C_4 alkyl radical, a C_1 - C_4 monohydroxyalkyl radical, a C_2 - C_4 polyhydroxyalkyl radical or a C_1 - C_4 monoaminoalkyl radical;

it being understood that at least one of the radicals R_1 and R_2 represents a halogen atom.

2. Composition according to Claim 1, characterized in that the halogenated meta-aminophenols of formula (I) are chosen from 3-amino-6-chlorophenol, 3-amino-6-bromophenol, 3-(β -aminoethyl)amino-6-chlorophenol, 3-(β -hydroxyethyl)amino-6-chlorophenol and 3-amino-2-chloro-6-methylphenol, and the addition salts thereof with an acid.

3. Composition according to Claim 1 or 2, characterized in that the diaminopyrazoles which can be used as oxidation bases are chosen from:
a) the diaminopyrazoles of formula (II) below, and the addition salts thereof with an acid:



in which:

- R_5 represents a hydrogen atom, a C_1 - C_6 alkyl radical, a C_2 - C_4 hydroxyalkyl radical, a benzyl radical, a phenyl radical, a benzyl radical substituted with a halogen atom or with a C_1 - C_4 alkyl or C_1 - C_4 alkoxy group, or forms, with the nitrogen atom of the group NR_7R_8 in position 5, a hexahydropyridazine or tetrahydropyrazole

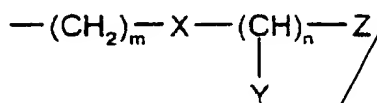
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- R₆ and R₇ which may be identical or different, represent a hydrogen atom, a C₁-C₄ alkyl radical, a C₂-C₄ hydroxyalkyl radical, a benzyl radical or a phenyl radical;

(III)

- R₉, R₁₀, R₁₁, R₁₂ and R₁₃, which may be identical or different, represent a hydrogen atom; a linear or branched C₁-C₆ alkyl radical; a C₂-C₄ hydroxyalkyl radical; a C₂-C₄ aminoalkyl radical; a phenyl radical; a phenyl radical substituted with a halogen atom or a C₁-C₄ alkyl, C₁-C₄ alkoxy, nitro, trifluoromethyl, amino or C₁-C₄ alkylamino radical; a benzyl radical; a benzyl

radical substituted with a halogen atom or with a C₁-C₄ alkyl, C₁-C₄ alkoxy, methylenedioxy or amino radical; or a radical



- 5 in which m and n are integers, which may be identical or different, between 1 and 3 inclusive, X represents an oxygen atom or an NH group, Y represents a hydrogen atom or a methyl radical, and Z represents a methyl radical, a group OR or NRR' in which R and R', which
- 10 may be identical or different, denote a hydrogen atom, a methyl radical or an ethyl radical, it being understood that when R₁₀ represents a hydrogen atom, then R₁₁ can also represent an amino or C₁-C₄ alkylamino radical,
- 15 - R₁₄ represents a linear or branched C₁-C₆ alkyl radical; a C₁-C₄ hydroxyalkyl radical; a C₁-C₄ aminoalkyl radical; a (C₁-C₄)alkylamino(C₁-C₄)alkyl radical; a di(C₁-C₄)alkylamino(C₁-C₄)alkyl radical; a hydroxy(C₁-C₄)alkylamino(C₁-C₄)alkyl radical; a (C₁-C₄)alkoxymethyl
- 20 radical; a phenyl radical; a phenyl radical substituted with a halogen atom or with a C₁-C₄ alkyl, C₁-C₄ alkoxy, nitro, trifluoromethyl, amino or C₁-C₄ alkylamino radical; a benzyl radical; a benzyl radical substituted with a halogen atom or with a C₁-C₄ alkyl, C₁-C₄ alkoxy,
- 25 nitro, trifluoromethyl, amino or C₁-C₄ alkylamino

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OR", in which p and q are integers, which may be identical or different, between 1 and 3 inclusive, and

- at least one of the radicals R_{10} , R_{11} , R_{12} and R_{13} represents a hydrogen atom,

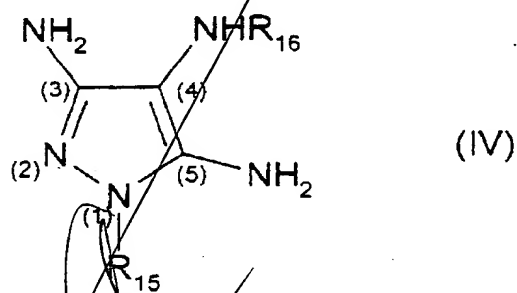
$$\text{---}(\text{CH}_2)_m\text{---X---}(\underset{\begin{array}{c} | \\ \text{Y} \end{array}}{\text{CH}})_n\text{---Z}$$

15 - when R_{12} and R_{13} simultaneously represent a hydrogen atom, then R_9 can form, with R_{10} and R_{11} , a hexahydropyrimidine or tetrahydroimidazole heterocycle which is optionally substituted with a C_1 - C_4 alkyl or 1,2,4-tetrazole radical,

20 - when R₁₀, R₁₁, R₁₂ and R₁₃ represent a hydrogen atom or
a C₁-C₆ alkyl radical, then R₉ or R₁₄ can also represent
a 2-, 3- or 4-pyridyl, 2- or 3-thienyl or 2- or 3-furyl
heterocyclic residue which is optionally substituted

with a methyl radical or alternatively a cyclohexyl radical.

4. Composition according to Claim 1 or 2, characterized in that the triaminopyrazoles which can be used as oxidation bases are chosen from the compounds of formula (IV) below, and the addition salts thereof with an acid:



in which:

10 - R_{15} and R_{16} , which may be identical or different, represent a hydrogen atom or a C_1 - C_4 alkyl or C_2 - C_4 hydroxyalkyl radical.

5. Composition according to Claim 3, characterized in that the diaminopyrazoles of formula (II) are chosen from 4,5-diamino-1-(4'-methoxybenzyl)-pyrazole, 4,5-diamino-1-(4'-methylbenzyl)pyrazole, 4,5-diamino-1-(4'-chlorobenzyl)pyrazole, 4,5-diamino-1-(3'-methoxybenzyl)pyrazole, 4-amino-1-(4'-methoxybenzyl)-5-methylaminopyrazole, 4-amino-5-(β -hydroxyethyl)amino-1-(4'-methoxybenzyl)pyrazole, 4-amino-5-(β -hydroxyethyl)-amino-1-methylpyrazole, 4-amino-(3)5-methylamino-

6. Composition according to Claim 3, characterized in that the diaminopyrazoles of formula (III) are chosen from:

- 10 - 1-benzyl-4,5-diamino-3-methylpyrazole,
- 4,5-diamino-1-(β -hydroxyethyl)-3-(4'-methoxyphenyl)-
pyrazole,
- 4,5-diamino-1-(β -hydroxyethyl)-3-(4'-methylphenyl)-
pyrazole,
15 - 4,5-diamino-1-(β -hydroxyethyl)-3-(3'-methylphenyl)-
pyrazole,
- 4,5-diamino-3-methyl-1-isopropylpyrazole,
- 4,5-diamino-3-(4'-methoxyphenyl)-1-isopropylpyrazole,
- 4,5-diamino-1-ethyl-3-methylpyrazole,
20 - 4,5-diamino-1-ethyl-3-(4'-methoxyphenyl)pyrazole,
- 4,5-diamino-3-hydroxymethyl-1-methylpyrazole,
- 4,5-diamino-1-ethyl-3-hydroxymethylpyrazole,
- 4,5-diamino-3-hydroxymethyl-1-isopropylpyrazole,
- 4,5-diamino-3-hydroxymethyl-1-tert-butylpyrazole,
25 - 4,5-diamino-3-hydroxymethyl-1-phenylpyrazole,

- 4,5-diamino-3-hydroxymethyl-1-(2'-methoxyphenyl)-pyrazole,
- 4,5-diamino-3-hydroxymethyl-1-(3'-methoxyphenyl)-pyrazole,
- 5 - 4,5-diamino-3-hydroxymethyl-1-(4'-methoxyphenyl)-pyrazole,
- 1-benzyl-4,5-diamino-3-hydroxymethylpyrazole,
- 4,5-diamino-3-methyl-1-(2'-methoxyphenyl)pyrazole,
- 4,5-diamino-3-methyl-1-(3'-methoxyphenyl)pyrazole,
- 10 - 4,5-diamino-3-methyl-1-(4'-methoxyphenyl)pyrazole,
- 3-aminomethyl-4,5-diamino-1-methylpyrazole,
- 3-aminomethyl-4,5-diamino-1-ethylpyrazole,
- 3-aminomethyl-4,5-diamino-1-isopropylpyrazole,
- 3-aminomethyl-4,5-diamino-1-tert-butylpyrazole,
- 15 - 4,5-diamino-3-dimethylaminomethyl-1-methylpyrazole,
- 4,5-diamino-3-dimethylaminomethyl-1-isopropylpyrazole,
- 4,5-diamino-3-dimethylaminomethyl-1-tert-butylpyrazole,
- 20 - 4,5-diamino-3-ethylaminomethyl-1-methylpyrazole,
- 4,5-diamino-3-ethylaminomethyl-1-ethylpyrazole,
- 4,5-diamino-3-ethylaminomethyl-1-isopropylpyrazole,
- 4,5-diamino-3-ethylaminomethyl-1-tert-butylpyrazole,
- 4,5-diamino-3-methylaminomethyl-1-methylpyrazole,
- 25 - 4,5-diamino-3-methylaminomethyl-1-isopropylpyrazole,
- 4,5-diamino-1-ethyl-3-methylaminomethylpyrazole,

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- 1-tert-butyl-4,5-diamino-3-methylaminomethylpyrazole,
- 4,5-diamino-3-[(β -hydroxyethyl)aminomethyl]-1-methylpyrazole,
- 4,5-diamino-3-[(β -hydroxyethyl)aminomethyl]-1-isopropylpyrazole,
- 4,5-diamino-1-ethyl-3-[(β -hydroxyethyl)aminomethyl]-pyrazole,
- 1-tert-butyl-4,5-diamino-3-[(β -hydroxyethyl)aminomethyl]pyrazole,
- 4-amino-5-(β -hydroxyethyl)amino-1,3-dimethylpyrazole,
- 4-amino-5-(β -hydroxyethyl)amino-1-isopropyl-3-methylpyrazole,
- 4-amino-5-(β -hydroxyethyl)amino-1-ethyl-3-methylpyrazole,
- 4-amino-5-(β -hydroxyethyl)amino-1-tert-butyl-3-methylpyrazole,
- 4-amino-5-(β -hydroxyethyl)amino-1-phenyl-3-methylpyrazole,
- 4-amino-5-(β -hydroxyethyl)amino-1-(2-methoxyphenyl)-3-methylpyrazole,
- 4-amino-5-(β -hydroxyethyl)amino-1-(3-methoxyphenyl)-3-methylpyrazole,
- 4-amino-5-(β -hydroxyethyl)amino-1-(4-methoxyphenyl)-3-methylpyrazole,

- 4-amino-5-(β -hydroxyethyl)amino-1-benzyl-3-methylpyrazole,
- 4-amino-1-ethyl-3-methyl-5-methylaminopyrazole,
- 4-amino-1-tert-butyl-3-methyl-5-methylaminopyrazole,
5 - 4,5-diamino-1,3-dimethylpyrazole,
- 4,5-diamino-3-tert-butyl-1-methylpyrazole,
- 4,5-diamino-1-tert-butyl-3-methylpyrazole,
- 4,5-diamino-1-methyl-3-phenylpyrazole,
- 4,5-diamino-1-(β -hydroxyethyl)-3-methylpyrazole,
10 - 4,5-diamino-1-(β -hydroxyethyl)-3-phenylpyrazole,
- 4,5-diamino-1-methyl-3-(2'-chlorophenyl)pyrazole,
- 4,5-diamino-1-methyl-3-(4'-chlorophenyl)pyrazole,
- 4,5-diamino-1-methyl-3-(3'-trifluoromethylphenyl)-pyrazole,
15 - 4,5-diamino-1,3-diphenylpyrazole,
- 4,5-diamino-3-methyl-1-phenylpyrazole,
- 4-amino-1,3-dimethyl-5-phenylaminopyrazole,
- 4-amino-1-ethyl-3-methyl-5-phenylaminopyrazole,
- 4-amino-1,3-dimethyl-5-methylaminopyrazole,
20 - 4-amino-3-methyl-1-isopropyl-5-methylaminopyrazole,
- 4-amino-3-isobutoxymethyl-1-methyl-5-methylamino-pyrazole,
- 4-amino-3-methoxyethoxymethyl-1-methyl-5-methylamino-pyrazole,
25 - 4-amino-3-hydroxymethyl-1-methyl-5-methylamino-pyrazole,

- 4-amino-1,3-diphenyl-5-phenylaminopyrazole,
- 4-amino-3-methyl-5-methylamino-1-phenylpyrazole,
- 4-amino-1,3-dimethyl-5-hydrazinopyrazole,
- 5-amino-3-methyl-4-methylamino-1-phenylpyrazole,
- 5 - 5-amino-1-methyl-4-(N,N-methylphenyl)amino-3-(4'-chlorophenyl)pyrazole,
- 5-amino-3-ethyl-1-methyl-4-(N,N-methylphenyl)aminopyrazole,
- 5-amino-1-methyl-4-(N,N-methylphenyl)amino-3-phenylpyrazole,
- 10 - 5-amino-3-ethyl-4-(N,N-methylphenyl)aminopyrazole,
- 5-amino-4-(N,N-methylphenyl)amino-3-phenylpyrazole,
- 5-amino-4-(N,N-methylphenyl)amino-3-(4'-methylphenyl)pyrazole,
- 15 - 5-amino-3-(4'-chlorophenyl)-4-(N,N-methylphenyl)aminopyrazole,
- 5-amino-3-(4'-methoxyphenyl)-4-(N,N-methylphenyl)aminopyrazole,
- 4-amino-5-methylamino-3-phenylpyrazole,
- 20 - 4-amino-5-ethylamino-3-phenylpyrazole,
- 4-amino-5-ethylamino-3-(4'-methylphenyl)pyrazole,
- 4-amino-3-phenyl-5-propylaminopyrazole,
- 4-amino-5-butylamino-3-phenylpyrazole,
- 4-amino-3-phenyl-5-phenylaminopyrazole,
- 25 - 4-amino-5-benzylamino-3-phenylpyrazole,
- 4-amino-5-(4'-chlorophenyl)amino-3-phenylpyrazole,

- 4-amino-3-(4'-chlorophenyl)-5-phenylaminopyrazole,
 - 4-amino-3-(4'-methoxyphenyl)-5-phenylaminopyrazole,
 - 1-(4'-chlorobenzyl)-4,5-diamino-3-methylpyrazole,
 - 4,5-diamino-3-hydroxymethyl-1-isopropylpyrazole,
 - 5 - 4-amino-1-ethyl-3-methyl-5-methylaminopyrazole,
 - 4-amino-5-(2'-aminoethyl)amino-1,3-dimethylpyrazole,
- and the addition salts thereof with an acid.

7. Composition according to Claim 6,
characterized in that the diaminopyrazoles of formula
- 10 (III) are chosen from:
- 4,5-diamino-1,3-dimethylpyrazole,
 - 4,5-diamino-3-methyl-1-phenylpyrazole,
 - 4,5-diamino-1-methyl-3-phenylpyrazole,
 - 4-amino-1,3-dimethyl-5-hydrazinopyrazole,
 - 15 - 1-benzyl-4,5-diamino-3-methylpyrazole,
 - 4,5-diamino-3-tert-butyl-1-methylpyrazole,
 - 4,5-diamino-1-tert-butyl-3-methylpyrazole,
 - 4,5-diamino-1-(β -hydroxyethyl)-3-methylpyrazole,
 - 4,5-diamino-1-ethyl-3-methylpyrazole,
 - 20 - 4,5-diamino-1-ethyl-3-(4'-methoxyphenyl)pyrazole,
 - 4,5-diamino-1-ethyl-3-hydroxymethylpyrazole,
 - 4,5-diamino-3-hydroxymethyl-1-methylpyrazole,
 - 4,5-diamino-3-hydroxymethyl-1-isopropylpyrazole,
 - 4,5-diamino-3-methyl-1-isopropylpyrazole,
 - 25 - 4-amino-5-(2'-aminoethyl)amino-1,3-dimethylpyrazole,
- and the addition salts thereof with an acid.

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8. Composition according to Claim 4 characterized in that the triaminopyrazoles of formula (IV) are chosen from 3,4,5-triaminopyrazole, 1-methyl-3,4,5-triaminopyrazole, 3,5-diamino-1-methyl-4-methylaminopyrazole and 3,5-diamino-4-(β -hydroxyethyl)amino-1-methylpyrazole, and the addition salts thereof with an acid.

9. Composition according to any one of the preceding claims, characterized in that the diaminopyrazole(s) and/or the triaminopyrazole(s) and/or the corresponding addition salt(s) with an acid represent(s) from 0.0005 to 12% by weight relative to the total weight of the dye composition.

10. Composition according to Claim 9, characterized in that the diaminopyrazole(s) and/or the triaminopyrazole(s) and/or the corresponding addition salt(s) with an acid represent(s) from 0.005 to 6% by weight relative to the total weight of the dye composition.

11. Composition according to any one of the preceding claims, characterized in that the halogenated meta-aminophenol(s) of formula (I) and/or the corresponding addition salt(s) with an acid represent(s) from 0.0001 to 5% by weight relative to the total weight of the dye composition.

12. Composition according to Claim 11, characterized in that the halogenated meta-aminophenol(s) of formula (I) and/or the corresponding addition salt(s) with an acid represent(s) from 0.005 to 3% by weight relative to the total weight of the dye composition.

13. Composition according to any one of the preceding claims, characterized in that the addition salts with an acid are chosen from the hydrochlorides, hydrobromides, sulphates, tartrates, lactates and acetates.

14. Composition according to any one of the preceding claims, characterized in that the medium which is suitable for dyeing (or support) consists of water or of a mixture of water and at least one organic solvent chosen from C₁-C₄ lower alkanols, glycerol, glycols and glycol ethers, aromatic alcohols, similar products and mixtures thereof.

15. Composition according to any one of the preceding claims, characterized in that it has a pH of between 3 and 12.

16. Composition according to any one of the preceding claims, characterized in that it is in the form of liquids, creams or gels or in any other form which is suitable for dyeing keratin fibres, and in particular human hair.

17. Process for dyeing keratin fibres, and in particular human keratin fibres such as the hair, characterized in that at least one dye composition as defined in any one of Claims 1 to 16 is applied to these fibres, and in that the colour is developed at acidic, neutral or alkaline pH with the aid of an oxidizing agent which is added to the dye composition just at the time of use, or which is present in an oxidizing composition that is applied simultaneously or sequentially.

18. Process according to Claim 17, characterized in that the oxidizing agent present in the oxidizing composition is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts such as perborates, percarbonates and persulphates, and peracids.

19. Multi-compartment device or multi-compartment dyeing "kit", a first compartment of which contains a dye composition as defined in any one of Claims 1 to 16, and a second compartment of which contains an oxidizing composition.

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